In the Specification:

Please amend the specification as shown:

Please delete the paragraph on page 15, line 32-38, and replace it with the following paragraph:

Attachment of the specific ER retention signals SEKDEL **(SEQ ID NO: 3)** (Schouten, A. et al., Plant Mol. Biol. 30 (1996), 781–792), may, inter alia, be of importance for advantageous high–level expression, thus tripling to quadrupling the average level of expression. It is also possible to employ other retention signals which occur naturally with plant and animal proteins localized in the ER for constructing the cassette.

Please delete the paragraph on page 17, lines 22-26, and replace it with the following paragraph:

An expression cassette can comprise, for example, a constitutive promoter (preferably the USP or napin promoter), the gene to be expressed and the ER retention signal. The ER retention signal which is preferably used is the amino acid sequence KDEL (lysine, aspartic acid, glutamic acid, leucine) **(SEQ ID NO: 13)**.

Please delete the paragraph on page 27, line 32, to page 28, line 1, and replace it with the following paragraph:

Eventually fragments of a Δ6–desaturase gene were cloned with the aid of a PCR reaction with the following degenerate oligonucleotides as primers:

A: TGGTGGAA(A/G)TGGA(C/A)ICA(T/C)AA **(SEQ ID NO: 4)** and
B: GG(A/G)AA(A/C/G/T)A(A/G)(G/A)TG(G/A)TG(C/T)TC] **(SEQ ID NO: 5)**

and the following temperature program:

94°C, 3 min; [94°C, 20 sec; 45°C, 30 sec; 72°C, 1 min], 30 cycles; 72°C, 5 min. For cloning, poly(A)RNA was isolated from 12–day–old P. patens Protonema cultures. The above–described PCR was carried out with this poly(A)RNA. Fragments of the expected fragment length (500 to 600 bp) were cloned into pUC18 and sequenced. The deduced amino acid sequence of a PCR fragment showed similarities with known Δ6–desaturases. Since it was known that P. patens has a Δ6–desaturase, it was assumed that this clone encodes part of a Δ6–desaturase.

Please delete the paragraph on page 28, lines 3-12, and replace it with the following paragraph:

A complete cDNA clone (= PPDES6 cDNA) was isolated from P. patens cDNA library of 12–day–old Protonemata with the aid of the PCR fragment specified above. The nucleotide sequence is shown in SEQ ID NO:1. The deduced amino acid sequence can be seen from SEQ ID NO:2. The corresponding genomic sequence (= PPDES6 gene) was isolated with the aid of the PCR and the following oligonucleotides as primers:

C: CCGAGTCGCGGATCAGCC **(SEQ ID NO: 6)**
D: CAGTACATTCGGTCATTCACC **(SEQ ID NO: 7)**:

Please delete the paragraph on page 28, line 46, to page 29, line 14, and replace it with the following paragraph:

The genomic Δ6–acyllipid desaturase from Physcomitrella patens was modified, isolated and used in the process according to the invention on the basis of the published sequence (Girke et al., Plant J., 15, 1998: 39-48) using a polymerase chain reaction and cloning. To this end, a desaturase fragment was first isolated by means of polymerase chain reaction using two gene–specific primers, and inserted into the desaturase gene described in Girke et al. (see above).

Primer TG5: 5'– ccgctcgagcgaggttgttgtggagcggc **(SEQ ID NO: 8)** and
Primer TG3: 5`–ctgaaatagtcttgctcc–3' **(SEQ ID NO: 9)**

were first used for amplifying a gene fragment by means of polymerase chain reaction (30 cycles, 30 sec. at 94°C, 30 sec. at 50°C, 60 sec. at 72°C, post-incubation for 10 minutes at 72°C, in a Perkin Elmer thermocycler).

Please delete the paragraph on page 30, lines 1-11, and replace it with the following paragraph:

In a PCR reaction, the P. patens Δ6-desaturase cDNA according to the invention was used as template. With the aid of the oligonucleotides stated hereinbelow, a BamHI restriction cleavage site was introduced before the start codon and three adenine nucleotides were introduced into the Δ6-desaturase cDNA as consensus translation sequence for eukaryotes. A 1512 base pair fragment of the Δ6-desaturase was amplified and sequenced.

Pp-d6Des1: 5'- CC GGTACC aaaatggtattcgcgggcggtg -3' **(SEQ ID NO: 10)**
Pp-d6Des2: 3'- CC GGTACC ttaactggtggtagcatgct -3' **(SEQ ID NO: 11)**

Please delete the paragraph on page 30, line 33, to page 31, line 8, and replace it with the following paragraph:

For the transformation of plants, a further transformation vector based on pBin-USP was generated, and this transformation vector contains the Δ6-desaturase BaMHI fragment. pBin-USP is a derivative of plasmid pBin19. pBinUSP originated from pBin19, by inserting an USP promoter into pBin19 [Bevan et al. (1980) Nucl. Acids Res. 12, 8711] as EcoRI-BamHI fragment. The polyadenylation signal is that of gene 3 of the T-DNA of the Ti-plasmid pTiACH5 (Gielen et al., (1984) EMBO J. 3, 835), where the nucleotides 11749-11939 were isolated as PvuII-HindIII fragment and, after the addition of SphI-linkers, cloned at the PvuII cleavage site between the SpHI-HindIII cleavage site of the vector. The USP promoter corresponds to the nucleotides 1-684 (Genbank Accession X56240), where part of the noncoding region of the USP gene was obtained in the promoter. The promoter fragment which is 684 base pairs in size was amplified with the aid of commercially available T7 standard primer (Stratagene) and with the aid of a synthesized primer via a PCR reaction using standard methods (primer sequence: 5'-GTCGACCCGCGGACTAGTGGGCCCTCTAGACCCGGGGGATCC GGATCTGCTGGCTATGAA-3', **SEQ ID NO: 12**). The PCR fragment was subsequently cut with EcoRI/SalI and inserted into the vector pBin19 with OCS terminator. This gave rise to the plasmid named pBinUSP.